

## I CLAIM:

1. A linefeed calibration method for use with an inkjet printer, the inkjet printer having a printhead with a first group of nozzles and a second group of nozzles, and having a media advancement mechanism, the  
5 method comprising:

printing on media a base pattern with a first group of nozzles;

advancing the media with the media advancement mechanism;

printing an overlay pattern with the second group of nozzles, the  
10 overlay pattern overlying the base pattern to form an interference pattern with a luminance representative of pattern alignment;

detecting the luminance of the interference pattern with a sensor;

and

15 comparing the luminance of the interference pattern with a reference luminance to identify a paper advancement error.

2. The linefeed calibration method of claim 1, further  
comprising coordinating the paper advancement error with a position on the  
media advancement mechanism.

3. The linefeed calibration method of claim 1, further  
comprising adjusting the media advancement mechanism to compensate for the  
linefeed error.

4. The linefeed calibration method of claim 1, wherein the sensor is an optical detector.

5. The linefeed calibration method of claim 1, wherein the base pattern and overlay pattern are identical.

6. The linefeed calibration method of claim 1, wherein the overlay pattern is offset from the base pattern along a horizontal axis perpendicular to a media advance direction.

7. The linefeed calibration method of claim 1, wherein the reference luminance is the luminance of a second interference pattern.

8. The linefeed calibration method of claim 1, wherein the media advancement mechanism includes a feed roller.

9. The linefeed calibration method of claim 1, wherein the media advancement mechanism includes a pick roller.

10. A linefeed calibration method for a printer, the method comprising:

printing on a media sheet a base sweep including at least a first base pattern and a second base pattern;

5       advancing the media sheet;

printing on the media sheet, an overlay sweep overlying the base sweep to form a calibration line, the overlay sweep including at least a first overlay pattern and a second overlay pattern, such that the first overlay pattern is printed on the first base pattern to form a first interference pattern with a detectable degree of alignment and the second overlay pattern is printed on the second base pattern to form a second interference pattern with a detectable degree of alignment; and

10       comparing the detectable degree of alignment of the first interference pattern with the detectable degree of alignment of the second interference pattern to identify an alignment variance to identify an advance error.

11. The linefeed calibration method of claim 10, wherein the  
20       printer includes a media advancement mechanism having an identifiable position, the method further comprising coordinating the advance error with the identifiable position on the media advancement mechanism.

12. The linefeed calibration method of claim 10, wherein the printer includes a media advancement mechanism having an identifiable position, the method further comprising adjusting the media advancement mechanism to compensate for the advance error.

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13. The linefeed calibration method of claim 10, wherein the first overlay pattern is offset in a horizontal direction from the second overlay pattern.

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14. The linefeed calibration method of claim 10, wherein the first overlay pattern is identical to the first base pattern.

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15. The linefeed calibration method of claim 10, wherein the first base pattern and second base pattern are identical.

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16. The linefeed calibration method of claim 10, wherein a sensor detects the degree of alignment of the first interference pattern and the degree of alignment of the second interference pattern.

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17. The linefeed calibration method of claim 10, wherein the linefeed error is an over-advance.

18. The linefeed calibration method of claim 10, wherein the linefeed error is an under-advance.

5 19. The linefeed calibration method of claim 10, wherein the media sheet has a length and the printer includes a media advancement mechanism, the method further comprising printing a plurality of calibration lines extending the length of the media sheet each calibration line having an advance error;

10 coordinating the advance error of each calibration line with an identifiable position on the media advancement mechanism; and

adjusting the media advancement mechanism to compensate for the advance error for each identifiable position.

15 20. A method for detecting paper advance error in an inkjet printer, the printer having a media advance mechanism, the method comprising:

20 printing on a media sheet a first base sweep and a second base sweep positioned on an x-axis;

advancing the media sheet along a y-axis with the media advance mechanism;

25 printing on a media sheet a first overlay sweep overlying the first base sweep to form a first calibration line with a detectable degree of alignment and a second overlay sweep overlying the second base sweep to form a second calibration line with a detectable degree of alignment; and

comparing the degree of alignment of the first calibration line with the degree of alignment of the second calibration line to determine if there is a skew error.